



SEQUENCE LISTING

RECEIVED

DEC 12 2002

TECH CENTER 1600/2900

<110> MUKHERJEE, RAMA  
JAGGI, MANU  
PRASAD, SUDHANAND  
BURMAN, ANAND C

<120> NOVEL PEPTIDE ANALOGS FOR THE TREATMENT OF CANCER

<130> U012104-2

<140> 09/248,382

<141> 1999-02-11

<150> 343/DEL/98

<151> 1998-02-11

<160> 29

<170> PatentIn Ver. 2.0

<210> 1

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: This peptide  
was synthetically generated.

<400> 1

Leu Met Tyr Pro Thr Tyr Leu Lys

1

5

<210> 2

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: This peptide  
was synthetically generated.

<220>

<221> MOD\_RES

<222> (1)

<223> /product = 2-amino-isobutyric acid/ label = Aib

<220>  
<221> MOD\_RES  
<222> (7)  
<223> /product = 2-amino-isobutyric acid/ label = Aib

<400> 2  
Xaa Met Tyr Pro Thr Tyr Xaa Lys  
1 5

<210> 3  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: This peptide  
was synthetically generated.

<220>  
<221> MOD\_RES  
<222> (1)  
<223> /product = D-leucine/ label = D-Leu

<220>  
<221> MOD\_RES  
<222> (7)  
<223> /product = 2-amino-isobutyric acid/ label = Aib

<400> 3  
Xaa Met Tyr Pro Thr Tyr Xaa Lys  
1 5

<210> 4  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: This peptide  
was synthetically generated.

<220>  
<221> MOD\_RES  
<222> (6)  
<223> /product = D-tyrosine/ label = D-Tyr

<400> 4  
Leu Met Tyr Pro Thr Xaa Leu Lys  
1 5

<210> 5  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: This peptide  
was synthetically generated.

<220>  
<221> MOD\_RES  
<222> (7)  
<223> /product = D-leucine/label = D-Leu

<400> 5  
Leu Met Tyr Pro Thr Tyr Xaa Lys  
1 5

<210> 6  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: This peptide  
was synthetically generated.

<220>  
<221> MOD\_RES  
<222> (3)  
<223> /product = D-tyrosine/label = D-Tyr

<220>  
<221> MOD\_RES  
<222> (7)  
<223> /product = D-leucine/label = D-Leu

<400> 6  
Leu Met Xaa Pro Thr Tyr Xaa Lys  
1 5

<210> 7  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: This peptide  
was synthetically generated.

<220>  
<221> MOD\_RES  
<222> (1)  
<223> /product = D-leucine/label = D-Leu

<220>  
<221> MOD\_RES  
<222> (7)  
<223> /product = D-leucine/label = D-Leu

<400> 7  
Xaa Met Tyr Pro Thr Tyr Xaa Lys  
1 5

<210> 8  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: This peptide  
was synthetically generated.

<220>  
<221> MOD\_RES  
<222> (1)  
<223> /product = 2-amino-isobutyric acid/ label = Aib

<220>  
<221> MOD\_RES  
<222> (7)  
<223> /product = Di-ethylglycine/label = Deg

<400> 8  
Xaa Met Tyr Pro Thr Tyr Xaa Lys  
1 5

<210> 9  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: This peptide  
was synthetically generated.

<220>  
<221> MOD\_RES  
<222> (1)  
<223> /product = D-leucine/label = D-Leu

<220>  
<221> MOD\_RES  
<222> (7)  
<223> /product = Di-ethylglycine/ label = Deg

<400> 9  
Xaa Met Tyr Pro Thr Tyr Xaa Lys  
1 5

<210> 10  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: This peptide  
was synthetically generated.

<220>  
<221> MOD\_RES  
<222> (1)  
<223> /product = D-phenylalanine/label = D-Phe

<220>  
<221> MOD\_RES  
<222> (8)  
<223> /product = Leucine N-ethylamide/label = Leu-NHet

<400> 10  
Xaa Gln Trp Ala Val Gly His Xaa  
1 5

<210> 11  
<211> 8  
<212> PRT  
<213> Artificial Sequence  
  
<220>  
<223> Description of Artificial Sequence: This peptide  
was synthetically generated.

<220>  
<221> MOD\_RES  
<222> (1)  
<223> /product = D-phenylalanine/label = D-Phe

<400> 11  
Xaa Gln Trp Ala Val Gly His Leu  
1 5

<210> 12  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: This peptide  
was synthetically generated.

<220>  
<221> MOD\_RES  
<222> (1)  
<223> /product = D-phenylalanine/label = D-Phe

<220>  
<221> MOD\_RES  
<222> (6)  
<223> /product = 2-amino-isobutyric acid/ label = Aib

<400> 12  
Xaa Gln Trp Ala Val Xaa His Leu  
1 5

<210> 13  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: This peptide  
was synthetically generated.

<220>  
<221> MOD\_RES  
<222> (1)  
<223> /product = D-phenylalanine/label = D-Phe

<220>  
<221> MOD\_RES  
<222> (4)  
<223> /product = 2-amino-isobutyric acid/ label = Aib

<400> 13  
Xaa Gln Trp Xaa Val Gly His Leu  
1 5

<210> 14  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: This peptide  
was synthetically generated.

<220>  
<221> MOD\_RES  
<222> (1)  
<223> /product = D-phenylalanine/label = D-Phe

<220>  
<221> MOD\_RES  
<222> (6)  
<223> /product = 2-amino-isobutyric acid/ label = Aib

<400> 14  
Xaa Gln Trp Ala Val Xaa His Leu  
1 5

<210> 15  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: This peptide  
was synthetically generated.

<220>  
<221> MOD\_RES  
<222> (1)  
<223> /product = D-phenylalanine/label = D-Phe

<400> 15  
Xaa Gln Trp Ala Val Gly His Ile  
1 5

<210> 16  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: This peptide  
was synthetically generated.

<220>  
<221> MOD\_RES  
<222> (1)  
<223> /product = D-phenylalanine/label = D-Phe

<220>  
<221> MOD\_RES  
<222> (4)  
<223> /product = 2-amino-isobutyric acid/ label = Aib

<400> 16  
Xaa Gln Trp Xaa Val Gly His Ile  
1 5

<210> 17  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: This peptide  
was synthetically generated.



<220>  
 <221> MOD\_RES  
 <222> (1)  
 <223> /product = D-phenylalanine/label = D-Phe  
  
 <220>  
 <221> MOD\_RES  
 <222> (6)  
 <223> /product = 2-amino-isobutyric acid/ label = Aib  
  
 <400> 17  
 Xaa Gln Trp Ala Val Xaa His Ile  
     1                    5  
  
 <210> 18  
 <211> 11  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: This peptide  
       was synthetically generated.  
  
 <220>  
 <221> MOD\_RES  
 <222> (1)  
 <223> /product = D-arginine/label = D-Arg  
  
 <220>  
 <221> MOD\_RES  
 <222> (5)  
 <223> /product = D-phenylalanine/label = D-Phe  
  
 <220>  
 <221> MOD\_RES  
 <222> (7)  
 <223> /product = D-tryptophan/label = D-Trp  
  
 <220>  
 <221> MOD\_RES  
 <222> (9)  
 <223> /product = D-tryptophan/label = D-Trp  
  
 <400> 18  
 Xaa Pro Lys Pro Xaa Gln Xaa Phe Xaa Leu Leu  
     1                    5                    10

<210> 19  
 <211> 6  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: This peptide  
       was synthetically generated.  
  
 <220>  
 <221> MOD\_RES  
 <222> (1)  
 <223> /product = 2-amino-isobutyric acid/ label = Aib  
  
 <220>  
 <221> MOD\_RES  
 <222> (6)  
 <223> /product = 2-amino-isobutyric acid/ label = Aib  
  
 <400> 19  
 Xaa Met Gln Trp Phe Xaa  
   1                  5  
  
 <210> 20  
 <211> 6  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: This peptide  
       was synthetically generated.  
  
 <220>  
 <221> MOD\_RES  
 <222> (1)  
 <223> /product = Di-ethylglycine/label = Deg  
  
 <220>  
 <221> MOD\_RES  
 <222> (6)  
 <223> /product = 2-amino-isobutyric acid/ label = Aib  
  
 <400> 20  
 Xaa Met Gln Trp Phe Xaa  
   1                  5

<210> 21  
 <211> 6  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: This peptide  
       was synthetically generated.  
  
 <220>  
 <221> MOD\_RES  
 <222> (1)  
 <223> /product = D-leucine/label = D-Leu  
  
 <220>  
 <221> MOD\_RES  
 <222> (6)  
 <223> /product = 2-amino-isobutyric acid/ label = Aib  
  
 <400> 21  
 Xaa Met Gln Trp Phe Xaa  
       1                  5  
  
 <210> 22  
 <211> 11  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: This peptide  
       was synthetically generated.  
  
 <220>  
 <221> MOD\_RES  
 <222> (1)  
 <223> /product = D-arginine/label = D-Arg  
  
 <220>  
 <221> MOD\_RES  
 <222> (5)  
 <223> /product = 2-amino-isobutyric acid/ label = Aib  
  
 <220>  
 <221> MOD\_RES  
 <222> (7)  
 <223> /product = D-tryptophan/label = D-Trp

```

<220>
<221> MOD_RES
<222> (9)
<223> /product = D-tryptophan/label = D-Trp

<220>
<221> MOD_RES
<222> (10)
<223> /product = 2-amino-isobutyric acid/ label = Aib

<400> 22
Xaa Pro Lys Pro Xaa Gln Xaa Phe Xaa Xaa Leu
  1             5             10

<210> 23
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: This peptide
      was synthetically genrated

<220>
<221> MOD_RES
<222> (3)
<223> /product = 2-amino-isobutyric acid/ label = Aib

<220>
<221> MOD_RES
<222> (5)
<223> /product = D-phenylalanine/label = D-Phe

<220>
<221> MOD_RES
<222> (7)
<223> /product = D-tryptophan/label = D-Trp

<220>
<221> MOD_RES
<222> (9)
<223> /product = D-tryptophan/label = D-Trp

<400> 23
Arg Pro Xaa Pro Xaa Gln Xaa Phe Xaa Leu Leu
  1             5             10

```

<210> 24  
 <211> 14  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: This peptide  
       was synthetically generated.  
  
 <220>  
 <221> MOD\_RES  
 <222> (8)  
 <223> /product = D-tryptophan/label = D-Trp  
  
 <220>  
 <221> MOD\_RES  
 <222> (3)..(14)  
 <223> product - note: disulfide bridges: 3-14  
  
 <220>  
 <221> MOD\_RES  
 <222> (14)  
 <223> /product = D-cysteine/label = D-Cys  
  
 <400> 24  
 Ala Gly Cys Lys Asn Phe Phe Xaa Lys Thr Phe Thr Ser Xaa  
   1                  5                  10  
  
 <210> 25  
 <211> 14  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: This peptide  
       was synthetically generated.  
  
 <220>  
 <221> MOD\_RES  
 <222> (2)  
 <223> /product = 2-amino-isobutyric acid/ label = Aib  
  
 <220>  
 <221> MOD\_RES  
 <222> (8)

<223> /product = D-tryptophan/label = D-Trp

<220>

<221> MOD\_RES

<222> (13)

<223> /product = D-serine/label = D-Ser

<220>

<221> MOD\_RES

<222> (3)..(14)

<223> product - note: disulfide bridges: 3-14

<400> 25

Ala Xaa Cys Lys Asn Phe Phe Xaa Lys Thr Phe Thr Xaa Cys  
1 5 10

<210> 26

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: This peptide  
was synthetically generated.

<220>

<221> MOD\_RES

<222> (1)

<223> /product = D-phenylalanine/label = D-Phe

<220>

<221> MOD\_RES

<222> (4)

<223> /product = D-tryptophan/label = D-Trp

<220>

<221> MOD\_RES

<222> (5)

<223> /product = Ornithine/label = Orn

<220>

<221> MOD\_RES

<222> (7)

<223> /product = Penicillamine/label = Pen

<400> 26

Xaa Cys Tyr Xaa Xaa Thr Xaa Thr

1

5

<210> 27  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: This peptide  
was synthetically generated.

<220>  
<221> MOD\_RES  
<222> (1)  
<223> /product = D-phenylalanine/label = D-Phe

<220>  
<221> MOD\_RES  
<222> (4)  
<223> /product = D-tryptophan/label = D-Trp

<220>  
<221> MOD\_RES  
<222> (7)  
<223> /product = 2-amino-isobutyric acid/ label = Aib

<400> 27  
Xaa Cys Tyr Xaa Lys Thr Xaa Thr  
1 5

<210> 28  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: This peptide  
was synthetically generated.

<220>  
<221> MOD\_RES  
<222> (1)  
<223> /product = D-phenylalanine/label = D-Phe

<220>  
<221> MOD\_RES

<222> (8)  
 <223> /product = Isoleucine N-ethylamide/label =  
 Ile-NHet  
  
 <400> 28  
 Xaa Gln Trp Ala Val Gly His Xaa  
 1 5  
  
 <210> 29  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: This peptide  
 was synthetically generated.  
  
 <220>  
 <221> MOD\_RES  
 <222> (1)  
 <223> /product = D-phenylalanine/label = D-Phe  
  
 <220>  
 <221> MOD\_RES  
 <222> (3)  
 <223> /product = D-tryptophan/label = D-Trp  
  
 <220>  
 <221> MOD\_RES  
 <222> (8)  
 <223> /product = Leucine N-ethylamide/label = Leu-NHet  
  
 <400> 29  
 Xaa Gln Xaa Ala Val Gly His Xaa  
 1 5